

Specifications Engineering

"Specifications Engineering" is a professional function in the project design process.

Discussion: - The Construction Specification Institute (CSI) "Specifications Competition Committee" reports a pronounced and steady decrease in the number and quality of project manuals being submitted for award competition. It seems the trend of large AE firms is to abolish positions held by qualified engineers responsible for overall control of project manual development. AE firms using subcontractor Architect or Engineering firms are requiring those firms to prepare specification sections within their contracted area of responsibility. The general contractor AE firm exercises little or no control over the preparation of the sections by the individual subcontractors and fails to coordinate specifications prepared by the various disciplines or to assure that specifications are consistent with the contract clauses and Division 1 General Requirements. Smaller AE firms often have clerical staff work directly with the individual designers in preparing the project manual. Rarely is a registered Architect or Engineer responsible to work with individual designers and control preparation of the project manual.

The trend toward eliminating the registered professional as the controlling person in the preparation of the project manual is resulting in poor quality project manuals. Poor quality project manuals lead to higher project cost - it is more difficult for suppliers, subcontractors, and prime contractors to prepare their bids; bids are higher; contract administration costs are increased; and there are more modifications during construction.

To reverse this trend, the industry and USACE should recognize "*Specifications Engineering*" as a separate professional function. Having a registered professional in charge of the preparation of project manuals would improve construction specifications, and help to address the problems described above.

Definitions:

Specifications Engineering is the professional discipline of engineering and architecture having the oversight and control of the preparation of the project manual for a construction project.

Designer - The term used herein as the person (architectural, structural, mechanical and electrical) who establishes the technical qualities of products or technical characteristics for certain features of a project.

Functions of the Specifications Engineer:

The Specifications Engineer must be involved in all phases of a project, from planning, design, bidding, construction, and through post-construction. The Specifications Engineer is the responsible expert in the area of construction contract documents. The Specifications Engineer's major involvement is the development of the project manual during the projects final design phase. During planning and design development phases, the Specifications Engineer serves as a resource to identify and assist in resolving unusual construction contracting problems. The Specifications Engineer is primary responsible for the overall quality of the project manual.

The Specifications Engineer is a registered Architect or Engineer with additional qualifications of being a Construction Specifications Institute Certified Construction Specifier.

The Specifications Engineer must be thoroughly familiar bidding procedures and the relationship of 00 Documents to the other contract documents. The Specifications Engineer must have general knowledge of requirements of technical sections of Division 1-16 of the construction specifications and be thoroughly familiar with contract administration problems during the construction phase of a project. If computer programs are used in the development of the project manual, the Specifications Engineer must be thoroughly familiar with the use and limitations of those systems.

Preparation of Project Manuals: General Requirements - Project manuals are developed under

direction of the Specifications Engineer who ensures high-quality specifications meet the construction administrators concerns and project specifications comply with industry standards in format and content established by the Construction Specifications Institute (CSI) Manual of Practice. Project specifications when combined with project drawings provide a complete and comprehensive set of contract design documents that can be bid or negotiated fairly and can be executed little or no change.

Specification Engineer/designer relationship: The Specifications Engineer and designers must work closely to produce a quality project manual. (Note: The designer need not be different from Specifications Engineer in all situations. The Specifications Engineer may also be the designer for certain technical features of a project.) Designers are responsible for technical qualities and characteristics of the project features, and the Specifications Engineer working with the designer is responsible for the technical accuracy of the specified requirements.